1. INTRODUCTION

Play is a collection of mental and physical activities that can make children feel happy and satisfied while also enhancing their interpersonal interactions. It is an aspect of early childhood that fosters learning opportunities for young children by supporting their motor, linguistic, tactile, and sensory abilities as well as their awareness of their surroundings. Through play, children can explore and grow in their ability to grasp the environment, gaining new skills that will help them become more resilient and confident when faced with challenges in the future. Early childhood is typically defined as the period between birth and eight years in which children experience significant developmental milestones and acquire basic skills that lay the foundation for later learning and behaviour. This period is marked by rapid physical, cognitive, social, emotional, and linguistic growth. The environment in early life shapes developmental outcomes, having both good and negative effects on a child's growth and well-being. Children learn social skills, problem solving techniques, how to use their imagination and creativity, and how to cope with stress and anxiety via play. Play also boosts children's happiness and self-esteem because it serves as a sort of defence mechanism (Raval 2023). Traditional games teach children important skills like sharing, cooperation, and dispute resolution, while also promoting emotional regulation and resilience. While modern games encourage problem-solving exercises, imaginative play, and games requiring strategy and critical thinking all helps to promote cognitive growth. Both traditional and modern games allow children to explore their creativity, problem-solving abilities, emotional expression, peer interaction, and understanding of their surroundings in a safe and pleasurable environment.

1.1 NEED FOR THE STUDY

Technology has slowly created its influence in nearly every domain of our life, whether it is entertainment, work or leisure. Children today are accustomed to gadgets such as smartphones, tablets, and laptops because of these technological advancements. The screen time is dangerously increasing in children all over the world (Paldiwal et al., 2024). It has been observed that children's behavior of watching videos on the internet or playing digital games in early childhood has become widespread in recent years (Işikoglu et al., 2023). Excessive screen exposure in early childhood affects children in many aspects such as increased sedentary behaviour, unfavourable body composition, higher cardiometabolic risk, poor sleeping habits, unfavourable behavioural conduct, lower self-esteem, psychological issues including poor concentration, memory loss, and increased stress and depression

(Paldiwal et al., 2024). Children may neglect social interactions and academic responsibilities due to excessive gaming, leading to diminished social skills and academic performance (Ersoy & Sahbaz, 2023). Due to this screen addiction, children tend not to interact with the environment since they are too absorbed in playing online games (Gul, 2023). In contrast, traditional games are better at improving a variety of life skills including social interaction, communication skills, emotional control and conflict regulation. Additionally, traditional games are a great way for children to learn about the environment and develop an appreciation for nature. Furthermore, traditional games can introduce new experiences among children while playing with peers, encourage creativity, enhance concentration, problem solving and decision-making ability, teach children about teamwork and collaboration, helping them improve social skills and cognitive skills (Raval,2023; Erlangga, 2022). On the other hand, modern games are any form of play where children play with materials or toys with a set of rules that children must follow in order to achieve a specific goal. This could be finding clues to solve a puzzle, board game, ludo, maze, memory game, matching game, seriation, building blocks, crossword games etc. These types of modern games, in early years, is one of the best ways to teach children new skills as it keeps them highly engaged and excited while learning. Additionally, these games exercise the brain and stimulate areas responsible for memory formation and complex thought processes, thereby improving cognitive skills such as decision-making, strategic thinking, and problem-solving (Sianipar et al., 2022). Furthermore, these games help children in developing critical thinking and communication, empathy and fostering computational thinking skills through collaborative play helping in both social and cognitive development of children (Rosa et al., 2021; Jesus & Silveira, 2019). While some digital interactions can be beneficial, an overreliance on gaming and digital media may detract from essential social and cognitive experiences and emotional health, ultimately affecting developmental outcomes in children. Thus, it is crucial for balancing digital engagement with other enriching activities such as traditional and modern games that can support more positive and inducing developmental outcomes for children. Moreover, children reach "Industry vs. Inferiority" stage in age six which is a significant period of psychosocial stage. Providing a positive environment during this stage is crucial because it allows children to develop a sense of competence and self-esteem by encouraging their efforts, acknowledging their accomplishments, and supporting their learning, which is vital for their overall self-image and future success. Conversely, a negative environment can lead to feelings of inadequacy and inferiority if they are not given the opportunity to feel capable and appreciated in their abilities that lead to social withdrawal or struggles with peer

relationships. Therefore, providing a positive environment in this stage provides praise and encouragement to the children for their efforts, help them feel confident in their abilities to achieve goals and academic success. In light of these facts, the researcher considered investigating the importance and effect of Traditional Assamese games and Modern games on children's social and cognitive development. Hence, it was decided by the scholar to embark upon the research study entitled "Effectiveness of Traditional and Modern Games on Socio-Cognitive Development of Children in Biswanath, Assam" with the following objectives-

1.2 OBJECTIVES

Primary Objectives:

To analyse the effectiveness of traditional, modern and blended games on socio-cognitive development of children (6-8 years)

Secondary objectives:

- To assess social and cognitive development of children and to identify its predictor variables.
- To plan and prepare intervention package on Traditional, Modern and Blended games.
- To administer prepared intervention package among selected children.
- To find out effect of interventions on social and cognitive development among children in experimental groups.
- To identify the most effective intervention for social and cognitive development of children.

1.3 HYPOTHESES

Based on the objectives framed, certain null hypotheses are formulated as given below-

- H_o 1- There is no significant difference in the levels of social and cognitive development among children based on independent variables.
- H_o 2-There is no significant predictors of social and cognitive development among children.
- H_o 3- There is no significant difference on Socio-Cognitive development among children in Control and Experimental groups with respect to traditional, modern and blended games

- H_o 4- There is no significant difference between the interventions of traditional, modern and blended games on Socio-Cognitive Development of Children

2. METHODOLOGY

The present study was carried out in two phases-

2.1 (a) Assess social and cognitive development among children (6-8 years) and to find out the predictor variables among them.

2.1 (b) Effectiveness of the formulated intervention programmes in terms of socio-cognitive development of children (6-8 years).

2.1 (a) Assess social and cognitive development among children (6-8 years) and to find out the predictor variables among them.

The present study was conducted in Biswanath district of Assam. For selecting the sample, researcher collected a list of government primary schools from Biswanath block of Biswanath district. To make the sample representative, researcher selected 6 schools covering north (1 no.), south (1 no.), central (2 no.), east (1 no.) and west zone (1 no.) through random sampling technique. Researcher selected all the children aged from 6 to 8 years out of 6 selected schools irrespective of their gender and constitutes a total of 590 sample. For the first phase of the study, the researcher formulated a questionnaire to collect information regarding socio-demographic profile of the respondents. To assess social development of children standardized tool Vineland Social Maturity Scale (VSMS) and Malins Intelligence Scale for Indian Children (MISIC) for cognitive development was used for the study.

The acquired data was statistically analysed. The Shapiro-Wilks test for normality was computed and the test results revealed that the dependent variables of phase 1 – the mean scores of social development and cognitive development were normally distributed, and hence parametric tests were performed. Percentage analysis was carried out to assess the levels of social as well as cognitive development among the selected children of 6-8 years.

To assess the effect of socio-demographic factors on social and cognitive development of children both qualitative and quantitative analyses were computed. Independent sample t test (Quantitative measure) was performed to test mean difference of social and cognitive development among the children based on gender and type of family. One way ANOVA was used to test mean difference in social and cognitive development of children based on age, class, education status of parents, occupation of parents, family income, living area, number

of children in the family and game preferences. Further, multiple regression test was done to assess the strength of the relationship between social development and cognitive development (dependent variables) and several predictor variables (independent variables).

2.1 (b) Effectiveness of the formulated intervention programmes in terms of socio-cognitive development of children (6-8 years)

The Phase II of the study was to plan intervention programme based on traditional, modern and blended games and to assess the effectiveness on socio-cognitive development of the children. Accordingly, out of the 6 schools identified with a sample size of 590, researcher selected two schools through fishbowl technique for control and experimental group respectively. Prior to further study, consent from schools were taken and were ready to co-operate during implementation of intervention programme for about three months among experimental group. Out of these two schools, children of which school performed lower score in social and cognitive development were considered as experimental group to provide intervention programme and the other school children were considered as control group further analysis.

Accordingly, all students in the age group of 6-8 years under two schools constituted the sample for the second phase of the study. In school 1 (experimental group) researcher created three new groups including all the ages making it heterogeneous in nature constitutes a total of 100 children under experimental groups. Out of 100 children the group 1 included 34 children and equal number of children (33 numbers) were in group 2 and group 3. Later, children who were irregular in attending all the session of intervention programme were excluded from further analysis. Moreover, children who had high performance in both social and cognitive development were also excluded from further analysis. Thus, total of 90 children constitutes the final experimental groups where each group had 30 number of children. To make an equal sample for control group researcher had chosen 30 children under the age group 6,7 and 8 years respectively from the school 2 and compared the group with all the three experimental groups.

The Shapiro-Wilks test for normality was also computed for the second phase of data and the test results revealed that data were normal distributed. To compare differences in mean scores on social and cognitive development among the three experimental groups of children, to check if the intervention effect differs by time measures (Before, During and After) with an overall objective of evaluating the effectiveness of the traditional, modern and

blended games in improving social as well cognitive development MANOVA of repeated measures [3 (experimental groups) x 3 (Before, During and After evaluation scores of the two dependent variables, Social and cognitive development)] was computed.

To evaluate the pre-test and post- test comparison between experimental groups and control groups independent t-test were deployed and to see the effect size of interventions Cohen's *d* was performed.

3. KEY FINDINGS (Pre-data, n=590)

3.1 (a) Social Development

Overall Social Development

- Regarding social development, majority (42.3%) of the children had average level, 40.2% represented low and 17.5% were in high level.

Age

- In case of social development children of 8 years had higher value (mean=98.44, SD= 9.48) than children of 6 and 7 years and was statistically significant.

Mother's education

- Children of graduate mothers had higher social development (mean=99.66, SD=9.17) than children of mother's education up to 10^{th} std. and 12^{th} std and significant difference was found.

Number of children

- Children belongs to multiple children family had high social development (mean= 97.86, SD=9.70) as compared to single child and double children family and was statistically significant.

Living area

- Children of rural area had high social development (mean= 98.02, SD=9.17 than urban and semi urban area.

Family type

- With respect to family type children of joint family had high social development (mean=97.89 SD=9.46) than nuclear family children.

Game preference

- Children with traditional game preference had high social development (mean=101.68, SD=9.45) than children who prefers modern and digital games.

Predictor variables

- The variables, age, mother's education, family types, no. of children, living area and game preference were significantly predicting social development of children.

3.1 (b) Cognitive Development

Overall Cognitive Development

- In cognitive development, majority (50.5%) of them were under average category, 39.5% were in low level and rest of them (10%) were in high level of cognitive development.

Mother's education

- Regarding cognitive development, children of graduated mothers had high cognitive development (mean=97.05, SD=8.40) than mothers with 10^{th} std. and 12^{th} Std. and significant difference was found.

Family income

- Children of high family income had high cognitive development (mean=98.35, SD=7.15), than marginalized or lower income family.

Game preference

- Children of modern game preference had high cognitive development than children with preference of traditional games and digital games.

Predictor variables

- The variables Mother's education, family income and game preference were significantly predicting cognitive development of children.

3.2 Major findings (Experimental groups and control group, n=120)

3.2.1 Social development

3.2.1 (a) Traditional games

Overall Social Development

- Regarding experimental group 1, majority (73%) of the children had average level of social development and 27% had low level before the intervention.
- After the intervention of traditional games majority i.e. 63.30% of the children showed average level, 26.70% of children showed high level and the rest 10.00% showed low level of social development.
- In control group, regarding social development, majority (73.30%) of the children had average social development, followed by 26.70% who had lower level in the "before" phase.
- In the "after" phase of control group majority (83.30%) of the children were showing average level of social development and remaining 16.70% showing low level of social development.

Dimensions

- Significant difference was observed with medium effect size in Self-help general, Self-help eating, Self-help dressing, Self-direction and Occupation between the control and experimental group 1 after the intervention of traditional games.
- In communication, locomotion and social development significant difference observed between experimental group 1 and control group with large effect size of traditional games intervention.

3.2.1 (b) Modern games

Overall Social Development

- In the experimental Group 2, before modern games intervention, majority 76.70%) of the children had average social development and remaining 23.30% of children had low level.
- After intervention of modern games, majority (70.0%) of the children had average level of social development, 17.0% showed high level and remaining 13.30% had low level.
- In control group, regarding social development, majority (73.30%) of the children had average social development, followed by 26.70% who had lower level in the "before" phase.
- In the "after" phase of control group majority (83.30%) of the children were showing average level of social development and remaining 16.70% showing low level of social development.

Dimensions

- In Self-help general and Social development significant difference was found after modern games intervention with medium effect size.
- In Self-direction and Occupation significant difference was found after modern games intervention with large effect size.

3.2.1 (c) Blended games

Overall Social Development

- In the experimental group 3, before intervention majority (70.00%) of the children showed average level and remaining 30.00% had lower level of social development.
- After blended games intervention majority (60.00%) of the children showed average level and remaining 40.00% had higher level of social development.
- In control group, regarding social development, majority (73.30%) of the children had average social development, followed by 26.70% who had lower level in the "before" phase.
- In the "after" phase of control group majority (83.30%) of the children were showing average level of social development and remaining 16.70% showing low level of social development.

Dimensions

- In Self-help general, Self-direction, Occupation, Communication, Locomotion and Social development significant difference was found after blended games intervention with large effect size.

3.2.2 Cognitive Development

3.2.2 (a) Traditional games

Overall Cognitive Development

- Results revealed that in the experimental group 1, majority (73%) of the children found to be in average cognitive development and 27% had lower level of cognitive development before providing intervention.
- After traditional games intervention, majority (66.70%) of the respondents were showed average cognitive development, where equal no. i.e. 16.70% had low and high level

- Results revealed that majority (77%) of the children in the control group had average cognitive development and 23% had lower level of cognitive development “before” phase.
- On the other hand, majority (80.00%) of the respondents in the control, group had average cognitive development and 20.00% had lower level of cognitive development in the after phase.

Dimensions

- In Information, Comprehension, and Vocabulary significant difference was observed with large effect size of traditional games intervention.
- Arithmetic, Object assembly and overall Cognitive development had medium effect size after traditional games intervention.

3.2.2 (b) Modern games

- Majority (73.30%) of the respondents of the experimental group 2, were in average level of cognitive development and 26.70% had lower level of cognitive development before providing intervention.
- After providing modern games intervention, majority (60.00%) of the respondents were in average level, 33.00% had high level and 6.70% were in low level of cognitive development.
- Results revealed that majority (77%) of the children in the control group had average cognitive development and 23% had lower level of cognitive development “before” phase.
- On the other hand, majority (80.00%) of the respondents in the control, group had average cognitive development and 20.00% had lower level of cognitive development in the after phase

Dimensions

- In the dimensions of Arithmetic, Picture completion, Block, Maze and overall Cognitive development significant difference was found after modern games intervention with large effect size.
- In case of Information, Comprehension, Similarity, Digit span, Object assembly and Coding had medium effect size after modern games intervention.

3.2.2 (c) Blended games

- In the experimental group 3, majority (70.00%) of the respondents were in average level and 30.00% were in lower level of cognitive development before providing intervention.
- Majority (56.70%) of the respondents were in average level of cognitive development and remaining 43.30% were found to be in high level after providing blended games intervention.
- Results revealed that majority (77%) of the children in the control group had average cognitive development and 23% had lower level of cognitive development "before" phase.
- On the other hand, majority (80.00%) of the respondents in the control, group had average cognitive development and 20.00% had lower level of cognitive development in the after phase

Dimensions

- In Information, Comprehension, Arithmetic, Vocabulary, Picture completion, Block, Object assembly, Coding, Maze and overall Cognitive development large effect size was observed after blended games intervention.
- The dimensions of Similarity and Digit span had medium effect size after blended games intervention.

3.3 Conclusion

Both traditional and modern games have an impact on children since they foster social engagement and the growth of essential cognitive abilities. Traditional games are an excellent means of introducing new experiences and abilities to children while also teaching them about the environment and helping them understand nature. Social development is the process by which a person gradually acquires the abilities necessary to communicate with others and carry out everyday responsibilities in communities. It is necessary for a successful life since it influences social interactions, emotional stability, decision-making, and overall well-being.

Playing traditional games can inspire children to take on new challenges and help them build strong self-esteem. Along with developing social skills and interpersonal interactions, these outdoor games can also foster the development of self-confidence, independence, curiosity, coordination, balance, and the ability to handle difficult situations. In addition, modern games that come with play materials provide children the chance to interact with others, and parents

and other family members can support children in gaining the social skills necessary to succeed in life. Children can experiment and learn through their errors when playing modern games, which also helps them develop their critical thinking and problem-solving skills. These games are a great method to help children' cognitive skills and brain stimulation. Playing these games helps improve important cognitive abilities including memory, reasoning, and problem-solving as well as general cognitive function, all of which are necessary for efficient learning and growth. Hence, this research incorporated blended games with traditional and modern concepts to foster developments in the areas of self-help skills, self-direction, occupation skills, improved relationship, socialisation, co-operation, locomotion, communication, information, comprehension, critical thinking, vocabulary, analytical reasoning, problem solving and creativity offering children a diverse range of activities that stimulates both social and cognitive development which may help for overall wellbeing of children.

3.4 Implications of the study

- Will provide insights on role of traditional games of Assam with respect to developmental domains of children.
- Will help parents, educators to provide understanding of benefits of modern games using play materials on children.
- Will help parents and teachers to incorporate blended games in schools as well as home settings.
- As NEP, 2020 focuses on holistic development of children, this finding will encourage policy makers, educators to include blended games in academic curriculum.

3.5 Limitations of the study

- The study was limited to social and cognitive development of children.
- The study was limited to 6–8-year age group children particularly in Assam.
- The assessment procedure was long and time consuming.
- The study focused only on few traditional games of Assam.
- The study was limited to only government school children.
- The study was limited to normal school children

3.6 Recommendations of the study

- The study can be conducted with other age group of children.
- The study can focus on other developmental domains of children
- Comparison of government and private school children can be done.
- The study can also focus on individual games with benefits in various states
- The study can also be conducted in special schools based on their developmental needs.

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